

# FOR OBSTETRICAL HEALTH CARE PROVIDERS

## What should I tell my patients about CMV?

- About 40% of women (40 of every 100) who become infected with CMV for the first time during a pregnancy will pass the infection to their fetus.
- About 1 in 150 children is born with congenital CMV infection. In Utah, this equates to one child per day.
- Congenital CMV infection is a known, but very rare, cause of pregnancy loss.
- About 1 of every 5 children born with congenital CMV infection (1 in 750 children overall) will develop permanent problems (such as hearing loss or developmental disabilities) due to the infection.
- Congenital CMV infections can only be prevented by preventing CMV infection in pregnant women. There is no available vaccine for preventing CMV. However, pregnant women can take steps that may reduce their exposure to CMV.

### Talking Points:

- If you're pregnant or planning a pregnancy, the best way to protect your baby from CMV is to protect yourself.
  - Wash your hands often with soap and water for 15-20 seconds, especially after
    - changing diapers
    - feeding a young child
    - wiping a young child's nose or drool
    - handling children's toys
  - Don't share food, drinks, or eating utensils with a child.
  - Do not put a child's pacifier in your mouth.
  - Do not share a toothbrush with a young child.
  - Use soap and water or a disinfectant to clean toys, countertops, and other surfaces that may have a child's saliva or urine on them.
  - Avoid contact with a child's saliva when kissing or snuggling.
- The Utah Department of Health CMV Core Facts could be provided to patients as a source of basic information about CMV infection and prevention. There is also a brochure entitled, "[CMV What Women NEED TO KNOW](#)", that can be given to your patients.

## When should I screen my patients for CMV infection?

- When infected with CMV, most women have no symptoms, but some may have symptoms resembling mononucleosis or influenza. Women who develop a mononucleosis or flu-like illness during pregnancy should be tested for CMV.
- Testing should also be considered for women who have close contact with children or adults with known CMV infection.
- CMV can cause fetal abnormalities that are visualized by ultrasound. If abnormalities are detected during routine fetal ultrasonography, CMV testing may be important and should be discussed with a high-risk obstetrician (Maternal-Fetal Medicine physician).
- In women who have a stillbirth (fetal death  $\geq 16$  weeks gestation), CMV infection should be considered as a possible cause. The fetus should be evaluated for signs of CMV infection (through placental pathology and fetal autopsy). Maternal serology is not generally helpful in this situation.
- The value of screening asymptomatic pregnant women or women of childbearing age for CMV is uncertain. Women should discuss this with their obstetricians or primary care physicians. Women who show prior evidence of CMV infection through blood testing (immunity to CMV) have considerable protection from the potentially damaging effects of CMV on the unborn infant, although this protection is not complete. Therefore all pregnant women, regardless of prior exposure, should take steps to reduce exposure to CMV (see ‘Talking Points’, above)

## If I suspect a maternal CMV infection, how do I test my patient?

- CMV antibodies (IgG and IgM) are tested on maternal serum.
  - IgG- IgM- indicates a woman is not immune to CMV and should be especially careful to prevent infection by avoiding contact with the saliva and urine of young children.
  - IgG+ IgM- indicates immunity to CMV. Women should still use the same precautions to avoid CMV, since reinfection may still pose a risk to the fetus.
  - IgG+ IgM+ indicates either a recent or past infection. The presence of CMV IgM is not solely indicative of primary infection. CMV IgM is detectable when a person 1) is newly infected, 2) has been infected in the past but recently re-exposed to CMV, 3) is undergoing reactivation of CMV infection that was acquired in the past, or 4) has a false-positive test result. Thus, the presence of CMV IgM should not be used by itself to diagnose primary CMV infection.

Recently, IgG avidity assays, which measure antibody maturity, have been shown to reliably detect recent primary CMV infection. When a person is infected with CMV for the first time, the body produces low-avidity IgG. After 2-4 months, the body begins to produce high-avidity CMV IgG. Low CMV IgG avidity suggests a primary CMV infection occurred within the past 2-4 months. High CMV IgG avidity suggests that CMV infection occurred at some point in the past. In the United States, CMV IgG avidity tests are not yet widely available commercially, but are available at some labs.

## What are signs of congenital CMV infection before birth?

- Signs of fetal CMV infection may be seen on routine ultrasound. Possible findings include intrauterine growth restriction, microcephaly, ventriculomegaly, intracranial calcifications, and echogenic bowel.
- Fetal infection is diagnosed by PCR or viral culture of amniotic fluid collected by amniocentesis.
- Congenital CMV infection can be diagnosed when CMV is detected in an infant's body fluids or tissues within the first three weeks of life. PCR detection of CMV in saliva or urine is currently the preferred method to confirm congenital CMV infection.

## Where should I go for additional information about CMV?

- The Utah Department of Health CMV Core Facts is a resource for patients and health care providers. That and many other documents, including patient brochures created for this initiative can be found at:

**[Health.utah.gov/CMV](http://Health.utah.gov/CMV)**

- You can reach the Utah Department of Health Early Hearing Detection and Intervention program for further information at (801) 584-8215 or [smcvicar@utah.gov](mailto:smcvicar@utah.gov). Please let them know if you wish to request CMV Awareness and Prevention posters for your office(s) and/or a presentation on CMV for your staff.
- The CDC CMV website is an excellent source of information (<http://www.cdc.gov/cmv>).
- If you have a patient with possible CMV infection during pregnancy, or you have questions about CMV, please contact a high-risk obstetrician (Maternal Fetal Medicine physician) for consultation.